

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

1-44 (canceled)

- 45. (New) A packaged electronic device, comprising:
a substrate with a first surface having an integrated circuit thereon; and
a nano-particle material adjacent to the first surface.
- 46. (New) The device of claim 45, wherein the nano-particle material forms a layer contacting the first surface.
- 47. (New) The device of claim 45, further comprising a polymer packaging layer contacting the first surface.
- 48. (New) The device of claim 47, wherein the nano-particle material is incorporated into the packaging layer.
- 49. (New) The device of claim 47, wherein the packaging layer is between the first surface and the nano-particle material.
- 50. (New) The device of claim 45, wherein the nano-particle material is thixotropic.
- 51. (New) An optical device comprising:
an enclosure with an opening;
a photonic device within the enclosure;
a lid covering the opening; and
a nano-particle material between the lid and the enclosure.

52. (New) The optical device of claim 51, wherein the nano-particle material provides a hermetic seal between the enclosure and the lid.
53. (New) The optical device of claim 52, wherein the nano-particle material allows for relative motion between the lid and the cover while maintaining the hermetic seal.
54. (New) The optical device of claim 51, wherein the nano-particle material comprises a material with a low Young's Modulus.
55. (New) The device of claim 51, wherein the nano-particle material is thixotropic.
56. (New) A micro-fabricated structure, comprising:
a substrate having a first surface;
a micro-fabricated device positioned on the first surface of the substrate;
an intermediate layer with a first surface and a second surface, wherein the first surface of the intermediate layer is opposite the second surface of the intermediate layer, wherein the first surface of the intermediate layer is positioned adjacent to the first surface of the substrate, and wherein the intermediate layer substantially surrounds the device.
57. (New) The micro-fabricated structure of claim 56, wherein the first nano-particle material layer forms a hermetic seal between the cover and the intermediate layer.
58. (New) The micro-fabricated structure of claim 57, wherein the first nano-particle material layer is capable of absorbing moisture from surfaces it contacts.
59. (New) The micro-fabricated structure of claim 56, further comprising a second nano-particle layer positioned between the substrate and the first surface of the intermediate layer.
60. (New) The micro-fabricated structure of claim 56, wherein the substrate comprises any of a ceramic material, and an optically transparent material.

61. (New) The micro-fabricated structure of claim 56, wherein the intermediate layer comprises an optically transparent material.
62. (New) The device of claim 56, wherein the first nano-particle material layer is thixotropic.